

FIRST RECORD OF THE NYMPHALID BUTTERFLY *LEXIAS AEROPA* (L.) FROM AUSTRALIA

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Abstract

Three specimens of *Lexias aeropa* (L.) (Lepidoptera: Nymphalidae: Limenitini) are recorded from northern Cape York Peninsula, north Queensland, this being the first Australian record for this New Guinea* butterfly. The subspecific status of the Australian specimens is not resolved.

Introduction

Level with the northern part of Shelburne Bay in eastern Cape York Peninsula, north Queensland, the Great Dividing Range swings to within 10 km of the coast, and in the vicinity of 11°40'S. is capped by an extensive tract of rainforest. Further patches and riverine bands of rainforest occur on the adjacent narrow coastal plain. The presence of this rainforest system was only guessed at (Brass, 1953) until the recent construction of access roads; it is described and mapped by Lavarack and Stanton (1977), who give its total area as 60,000 ha. Visits by field parties in July, 1975, and February, 1976, enabled the first systematic entomological collecting to be undertaken in the area. Monteith and Hancock (in press) list 98 butterfly species from the region: one of these, *Lexias aeropa* (L.), a rather conspicuous nymphalid previously unrecorded from Australia, forms the subject of this paper.

A note on nomenclature

Various generic and specific names have been given to the species. It was originally described in *Papilio* by Linnaeus (1758), and was later included in a group of species designated as the genus *Euthalia* by Hübner in 1819. In 1832, Boisduval made it the unique member of his new genus *Lexias*, but this failed to gain popular acceptance, and most later writers retained the species in *Euthalia* (Fruhstorfer, 1913; Corbet, 1949). In the only comprehensive modern generic review of the tribe Limenitini, Chermock (1950) also regarded *Lexias* as a synonym of *Euthalia*. However, in very recent times, *Lexias* has come back into usage (D'Abrera, 1971; Smart, 1975), and we elect to accord with this practice.

Regarding the specific name, Linnaeus changed his original spelling, *aeropa*, of the 1758 10th edition of his *Systema Naturae* to *aeropus* in the 12th edition of 1767 (Hemming, 1967). Boisduval (1832) followed this change in citing the type species of *Lexias* as *Papilio aeropus*, and most subsequent writers have also used *aeropus* (Fruhstorfer, 1911-16; D'Abrera, 1971). However some modern authors have used the original *aeropa* (Corbet, 1949; Smart, 1975), and a third spelling *aerope*, was used by Chermock (1950). The specific name derives from the Greek mythological figure, Aerope, which, according to the International Code, should be latinized to *aeropa* and used as an unvarying noun in

* "New Guinea" is used throughout to indicate the island of New Guinea, i.e. Irian Jaya plus the mainland of Papua New Guinea.

opposition to the generic name. The change by Linnaeus in 1767 was thus an unjustified emendation under the Code and the correct trivial name should be *aeropa*.

Field observations

In July, 1975, three specimens of *Lexias aeropa* were collected: ♀, Dividing Range, 15 km W. of Captain Billy Creek, Cape York Pen., N. Qld (142°45' E, 11°40' S), 4-9.vii.1975, J. F. R. Kerr (In Kerr Collection); ♂, Captain Billy Creek Road Crossing, Cape York Pen., N. Qld (142°50' E, 11°40' S), 11.vii.1975, G. B. Monteith (In Australian National Insect Collection); ♂, same locality, 12.vii.1975, G. B. Monteith (In University of Queensland Insect Collection).

On the advice of an experienced New Guinea collector, Mr Don Sands, over-ripe bananas had been taken to the locality in the hope of attracting *Apaturina erminea* (Cramer), which has been sighted several times in Cape York Peninsula (Daniels, 1975) but which has yet to be netted. The female *Lexias* was netted at about midday while feeding on discarded skins of these bananas inside rainforest on the crest of the range at about 100 m altitude. Mr Sands has since confirmed that *L. aeropa* is often taken at fermenting fruit baits in New Guinea; Talbot (1932) records the species feeding on sap of an "ironwood tree" in Mysol. However, on a subsequent visit to the locality in February, 1976, by one of us (GBM), fruit baits were exposed over several days, but *Lexias* was not seen.

Both males taken were collected during mid-afternoon in swampy *Melaleuca* vegetation adjacent to riverine rainforest on the north bank of Captain Billy Creek on the coastal plain about 5 km from the coast. A further female was seen at the rainforest edge at 5.00 p.m. in the same locality, but escaped capture. When disturbed, adults fly for a short distance and then alight in the sun with wings outspread; males have some resemblance to *Yoma sabina parva* (Butler), which has similar habits and colour.

Discussion

Lexias aeropa is one of two members of the genus, the other being *Lexias panopus* Felder from the Philippines. *L. aeropa* occurs from the Moluccas in the west through New Guinea (including Aru and Kai) to the Bismarck Archipelago in the east. Within this range it exhibits considerable geographical variation, which, coupled with its pronounced sexual dimorphism and occasional female polymorphism, has generated a complex infra-specific terminology for the various forms. Eleven subspecies have been proposed as follows (see Fig. 1):

1. *L.a.aeropa* (Linn., 1758)
2. *L.a.cporidorix* (Fruhs., 1913)
3. *L.a.orestias* (Fruhs., 1913)
4. *L.a.paisandrus* (Fruhs., 1913)
5. *L.a.helvidius* (Fruhs., 1913)
6. *L.a.choirilus* (Fruhs., 1913)

Ambon, Ceram, Goram, Uliasser.
Figured by Clerck, 1764.

Bachan, Halmahera.

Sula-Mangoli Archipelago.

Obi.

Buru.

Waigeo. Fig. by Fruhstorfer (1913) and D'Abbrera (1971). Talbot (1932) indicates that it may be a synonym of the name *nodrica* Boisduval.

7. *L.a.eutychias* (Fruhs., 1913) New Guinea, Aru, Kai, Dampier Is.
 8. *L.a.hegias* (Fruhs., 1913) Figured by Fruhstorfer (1913).
 9. *L.a.angustifascia* (Joicey & Noakes, 1915) Bismarck Archipelago
 10. *L.a.mysolensis* (Talbot, 1932) Biak. Fig. Joicey & Noakes (1915).
 11. *L.a.meforensis* (Talbot, 1932) Mysol.
 Mefor (? = Numfor).

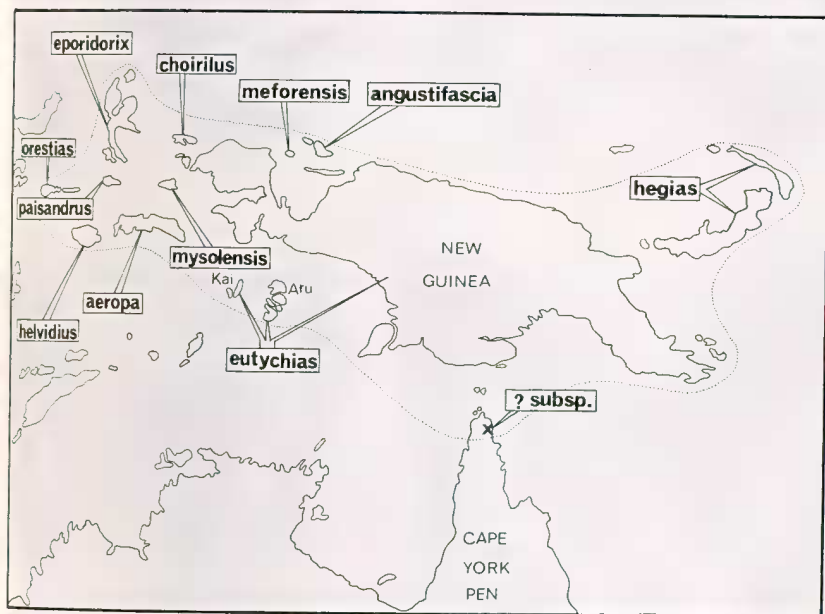
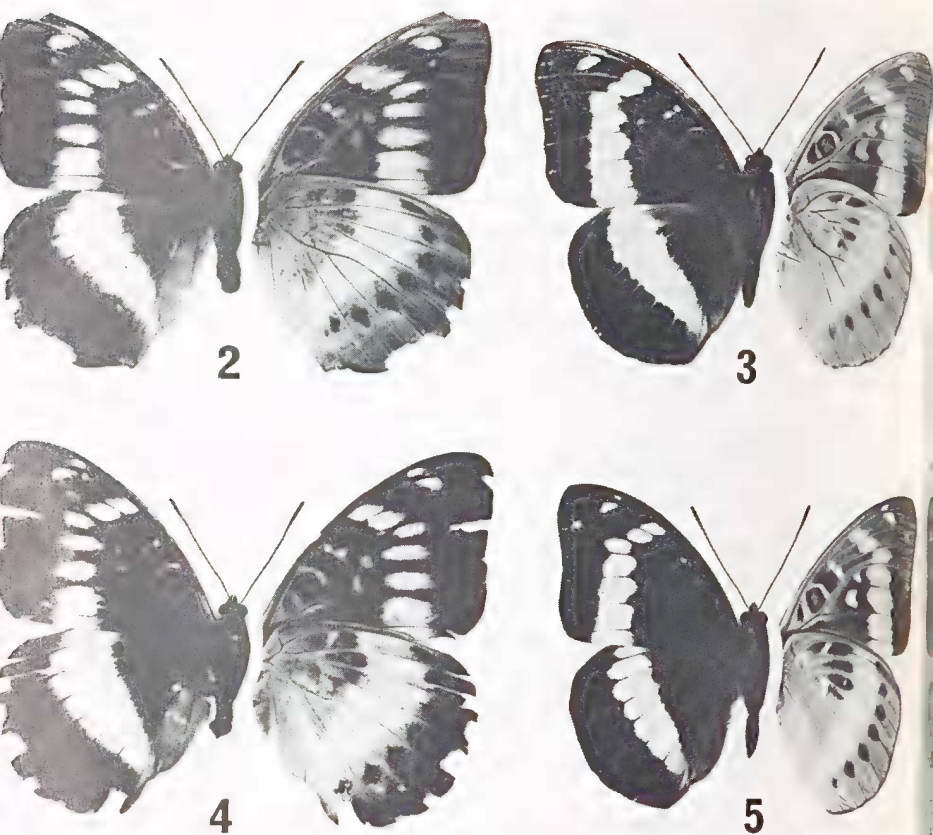


FIG. 1. Distribution of *Lexias aeropa* (L.) showing the known geographic extent of the species (dotted line) and the land masses on which the eleven nominal subspecies occur. The recorded locality for *L. aeropa* in Cape York Peninsula is indicated by X.

Most of these subspecies are differentiated by variations in width, colour and degree of interruption of the median bands on the fore and hind wings. Females are normally larger than males, with wing bands paler, and those of the fore wings more broken. In some subspecies females are polymorphic, existing in two or more colour forms; this is most pronounced in the New Guinea race, *eutychias*, where Fruhstorfer (1913) has given names to 4 non-geographic forms of the female, viz. f. *eutychias*, f. *ergena*, f. *albifera* and f. *midia*. The status of these various infra-specific nominal taxa is in need of review.

The capture of 3 specimens and the sighting of one more leave little doubt that a breeding population of *L. aeropa* exists in Australia, even though it has yet to be noted at such intensively collected and vegetationally more diverse areas as Cape York, 100 km to the north, and Iron Range, 120 km to the south of Captain Billy Creek. The taxonomic status of this population with



FIGS 2-5. *Lexias aeropa*: (2) ♀ from Captain Billy Creek region, Cape York Peninsula; (3) ♂ from same locality; (4) ♀ from Uberi, Central District, Papua New Guinea, 26.x.1975, D. P. Sands (In A.N.I.C.); (5) ♂ from Variata Park, Central District, Papua New Guinea, 4.x.1975, D. P. Sands (In A.N.I.C.).

respect to the complex existing infra-specific nomenclature described above is difficult to determine. Geographically, the Cape York population is closest to the widespread subspecies, *eutyhias*, from New Guinea, and this same subspecies is also recognized as occurring on the Aru and Kai Islands which are a similar distance from the south coast of the New Guinea mainland to that of Cape York. Examination of a number of specimens from eastern New Guinea shows *eutyhias* to be rather variable; in fact, variation within *eutyhias* seems comparable with that accepted as separating some of the nominal insular subspecies. Compared to New Guinea mainland specimens the female from Cape

York Peninsula (Fig. 2) is inseparable from "white" form females from Port Moresby (Fig. 4), but the two males differ from any New Guinea males seen in the greater width and more angled outer margin of the hindwing band and the less pointed hind wing tornus (Figs 3, 5). There seems little point in assigning the Australian form to any formal subspecific category until study of adequate material allows evaluation of the true biological status of the many described forms of this species.

The host plant of *L. aeropa* overseas is given as *Calophyllum* (Fam. Guttiferae) by Fruhstorfer (1913). Two species of *Calophyllum* occur in Cape York Peninsula: *C. inophyllum* L. associated with the coastline, and *C. sil* Laut. in the inland rainforests. Both would be expected to occur commonly in the region where the *Lexias* were encountered, as well as further south in north Queensland (J. G. Tracey, pers. comm.).

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